

## REMARKS

Claims 1 through 10 are pending in this application. Allowance of claim 2 is appreciated (per office action, ¶ 5). Claims 1 and 3-10 stand rejected.

### CLAIM REJECTIONS UNDER 35 U.S.C. § 103

Claims 1, 9, and 10 were rejected under 35 U.S.C. § 103(a) for alleged unpatentability over Ozolins U.S. Patent No. 5,990,858. Claims 3-8 were rejected under 35 U.S.C. § 103(a) for alleged unpatentability over Ozolins in view of Rokunohe *et al.* U.S. Patent No. 4,549,175.

#### A. Claim 4

Claim 4 depends from allowed claim 2. It therefore must be allowable.

#### B. What Ozolins Teaches

The office action states, of Ozolins (¶ 4):

On page 4, Applicant argue that claim 1, contains the following limitations: "said display apparatus adapted for operation without need for any analog-to-digital converter (ADC) or phase locked loop (PLL) circuit for signal conversion.". and on page 5, applicant argue that Ozolins would still not make the subject matter of claim 1 obvious. However Examiner disagrees, because Ozolins teaches the limitations of claim 1 (see col. 1, lines 63-67) and (see Fig. 1, col 2, lines 60-67 and col. 3, lines 1-47). Therefore, the last office action maintained.

However, examination of the Ozolins patent shows that Ozolins does not teach the limitations of claim 1. The pertinent limitations of claim 1, for purposes of this rejection, are "said display apparatus *adapted for operation without need for any analog-to-digital*

*converter (ADC) or phase-locked loop (PLL) circuit for signal conversion.*” (The same limitations are found in every claim in the case, directly or by dependency.) It should be noted that the term “adapted” introduces a positive claim limitation which must be given weight in determining patentability. In *Pac-Tec, Inc. v. Amerace Corp.*, 903 F.2d 796, 801, 14 U.S.P.Q.2d 1871, 1876 (Fed. Cir. 1990), the Federal Circuit held that a phrase beginning “adapted to” constituted a structural claim limitation that cannot be disregarded. Similarly, in *Julien v. Zerengue*, 864 F.2d 1569, 1571, 9 U.S.P.Q.2d 1552 (Fed. Cir. 1989), the Federal Circuit held that a “grab means being adapted to open and close in a direction transverse” to a path was a recital of an essential claim limitation. In *Polaroid Corp. v. Eastman Kodak Co.*, 789 F.2d 1556, 1570, 229 U.S.P.Q. 1556 (Fed. Cir. 1986), the Federal Circuit held that “adapted to extend into said openings” was a claim limitation that must be considered. See also *In re Venezia*, 530 F.2d 956, 189 U.S.P.Q.149, 1551-52 (CCPA 1976)(“this language imparts a structural limitation”).

Ozolins’ system, as shown in Fig. 1 and as acknowledged in ¶ 3 of the office action, has a PLL 90. At col. 1, lines 63-67, Ozolins states that recently introduced analog LCDs do not require ADCs but require stacks of boards or are incapable of any high-level functions. At col 2, lines 60-67 and col. 3, lines 1-47, Ozolins refers to an analog LCD panel 30. Ozolins then specifically mentions a PLL (col. 2, line 9 and then again at line 46). The correct grammatical meaning in ordinary English of “without need

for any analog-to-digital converter (ADC) or phase-locked loop (PLL)” is “without need for any analog-to-digital converter (ADC) *and* without need for any phase-locked loop (PLL).” To make the claim meaning even more abundantly clear, Jun has amended claim 1 to place the above quoted phrase of claim 1 within dashes and to precede its two clauses with “(i)” and “(ii)”, respectively; other claims are similarly amended. Also, grammatical and typographic errors are corrected.

Ozolins does not teach a system “without need for any phase-locked loop (PLL).” He teaches a system with a PLL. Therefore, Ozolins does *not* “teach[ ] the limitations of claim 1,” per the above quoted passage of the office action. Instead, Ozolins teaches away from the recited claim limitation of there being no need for a PLL.

Accordingly, the rejection of all rejected claims on the basis that Ozolins teaches all of the recited claim limitations is incorrect. *In re Lowry*, 32 F.3d 1579, 32 U.S.P.Q.2d 1031 (Fed. Cir. 1994) (“The PTO must consider all claim limitations when determining the patentability of an invention over the prior art.”).

### **C. Rejection of Claims 1, 9, and 10**

These claims are rejected solely on Ozolins. As shown above, Ozolins teaches a device using a PLL, contrary to the instant claim limitations. Furthermore, even in a single-reference § 103 rejection, the PTO Examining Staff must show a teaching, suggestion, or motivation in the prior art to make the adaptations and modifications of the

cited reference that are needed to arrive at the applicant's claimed invention. There must be a *specific* teaching, suggestion, or motivation in the prior art to make the particular combination of elements found in the claimed subject matter. *In re Lee*, 277 F.3d 1338 (Fed. Cir. 2002). See also *In re Dembiczak*, 175 F.3d 994, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999). That teaching, suggestion, or motivation is missing here.

Further, this rejection is based (as are all rejections in this case) on what a person of ordinary skill in the art knows, but there is no record evidence on the ordinary level of skill and no findings as to that. In *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999), the Federal Circuit overturned an obviousness rejection by the Board because of its failure to make the kind of obviousness legal analysis that the Supreme Court commanded in *Graham v. John Deere Co.*, 376 U.S. 1, 17-18 (1966). Such a legal analysis must begin, the Federal Circuit has consistently held, with making specific findings of fact regarding the level of ordinary skill in the art. Thus the *Dembiczak* decision held that an obviousness rejection must be reversed if, like the instant rejection, it fails to contain "specific findings of fact regarding the level of ordinary skill in the art." 175 F.3d at 1000-01, 50 USPQ2d at 1618. No such findings can be found in Paper No. 19. In addition, the findings that the PTO makes on the ordinary level of skill must be supported by substantial evidence of record. *In re Kaplan*, 789 F.2d 1574, 1580, 229 USPQ 678, 683 (Fed. Cir. 1986) ("Even if obviousness of the variation is predicated on

the level of skill in the art, prior art evidence is needed to show what that level of skill was.”).

Thus, the rejection in this office action lacks findings and analysis that the Federal Circuit considers essential to support a rejection based on ordinary skill in the art. In addition, the rejection in office action lacks substantial evidence of record to support such findings, even if they had been made.

**D. Rejection of Claims 3-8**

These claims are rejected under § 103 on Ozolins combined with Rokunobe. As pointed out above, claim 4 depends from allowed claim 2 and therefore is allowable on that basis alone, as well as that basis stated below.

1. Neither reference discloses how to avoid use of a PLL, which is an express limitation of all these claims, directly or by dependency. That alone makes the rejection of claims 3-8 bad.

2. Also, no claim rejection contains findings supported by substantial evidence as to the level of ordinary skill. That too alone makes the rejection of claims 3-8 bad.

3. Further, while Rokunobe shows that it is known to use a deflection signal generator, that fact does not of itself make it obvious to combine a deflection signal generator with the Ozolins device (modified somehow to omit the PLL). Before the PTO may combine the disclosures of two prior art references in order to establish *prima facie*

obviousness, it must establish on the record that some specific suggestion, motivation, or teaching is found in the prior art which would have led an ordinary artisan to select those specific references and to adapt and combine them in the same way that the inventor did. *Karsten Mfg. Corp. v. Cleveland Gulf Corp.*, 243 F.3d 1376, 1385, 58 USPQ2d 1286, 1293 (Fed. Cir. 2001) (“In holding an invention obvious in view of a combination of references, there must be some suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to select the references and combine them in the way that would produce the claimed invention.”); *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1998) (teaching or motivation or suggestion to combine is an “essential evidentiary component of an obviousness holding”); *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 546, 48 U.S.P.Q.2d 1321 (Fed. Cir. 1998) (“There must be a teaching or suggestion within the prior art, or within the general knowledge of a person of ordinary skill in the field of the invention, to look to particular sources of information, to select particular elements, and to combine them in the way they were combined by the inventor.”); *In re Rouffet*, 149 F.3d 1350, 1355, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998); *In re Chu*, 66 F.3d 292 (Fed. Cir. 1995).

4. The office action appears to claim that a teaching, suggestion, or motivation in the prior art can be extracted from the assertion “which make a convenient presentation to many people” at the end of the ¶ 4. But that statement is just a comment about what the

invention will accomplish if you use it *after having been taught it by Jun's specification*. That is too general and it is hindsight use of Jun's specification. It is just like the alleged motivation or suggestion asserted in *In re Lee*, 277 F.3d 1338 (Fed. Cir. 2002), where the Federal Circuit found it insufficiently specific and no better than hindsight. To justify the rejection in the *Lee* case, the PTO said that the motivation to combine references was that "the Thunderchopper mode 'is user-friendly' and it functions as a tutorial." In response, the Federal Circuit said:

With respect to Lee's application, neither the examiner nor the Board adequately supported the selection and combination of the Nortrup and Thunderchopper references to render obvious that which Lee described. *The examiner's conclusory statement[ ] that . . . "another motivation [to combine] would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do[es] not adequately address the issue of motivation to combine.* This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983). Thus the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion.

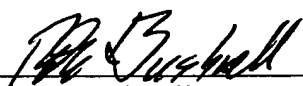
Using the benefits accomplished by the combination (here, "make a convenient presentation to many people"; in *Lee*, "is user friendly and it functions as a tutorial") as an alleged motivation to make the combination is hindsight use against the inventor of that which he has taught. It is inadequate as a statement of motivation. It flies in the face of Federal Circuit precedent.

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In view of the above, it is submitted that the claims of this application are in condition for allowance, and early issuance thereof is solicited.

No fee is incurred by this Amendment. Should any fee be incurred however, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees

Respectfully submitted,

  
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**MARKED-UP VERSION OF AMENDMENTS**  
**IN THE CLAIMS**

Please amend claims 1, 3 through 5, 7, 9, and 10, as follows:

1        1 (amended twice). A flat panel display apparatus for receiving display information  
2 including video data and synchronizing data from a host processing digital data in a serial  
3 digital communication, said display apparatus adapted for operation without need for any  
4 — (i) analog-to-digital converter (ADC) or (ii) phase-locked loop (PLL) circuit — for  
5 signal conversion, said display apparatus comprising:

6            a receiver for reconstructing said display information;

7            a synchronizing signal generator for generating a synchronizing signal by  
8            extracting the synchronizing data from said reconstructed display information;

9            a digital-to-analog converter (DAC) for converting said video data to a  
10            corresponding analog video signal; and

11           an output terminal for externally transferring said synchronizing signal and analog  
12           video signal to an analog display apparatus.

1        3 (amended twice). A digital data processing system including a host computer for  
2 processing digital data and a flat panel display apparatus for displaying display  
3 information received from said host computer, said system comprising:

4            a transmitter connected to said host to transfer digital display information as serial  
5            data;

6            a receiver for reconstructing said digital display information;

7            a synchronizing signal generator for generating a synchronizing signal by  
8            extracting synchronizing data from said reconstructed display information;

9 a digital-to-analog converter (DAC) for converting video data to a corresponding  
10 analog video signal; and  
11 an output terminal for externally transferring said synchronizing signal and said  
12 analog video signal to an analog display apparatus;  
13 wherein said flat panel display apparatus includes said receiver, said synchronizing signal  
14 generator, and said output terminal; and  
15 wherein said flat panel display apparatus does not utilize any — (i) analog-to-digital  
16 converter (ADC) or (ii) phase-locked loop (PLL) circuit — for signal conversion.

1 4 (amended twice). The display apparatus of claim 2, further comprising:

2 a liquid crystal display (LCD) driver for receiving data output from said video data  
3 converter; and  
4 an LCD display panel for receiving an output from said LCD driver.

1 5 (amended thrice). The display apparatus of claim 1, said analog display apparatus  
2 comprising:

3 an amplifier for receiving said video signal from said DAC via said output  
4 terminal and amplifying said video signal;  
5 a deflection signal generator for receiving said synchronizing signal output from  
6 said synchronizing signal generator via said output terminal and for generating  
7 deflection signals;  
8 a high voltage generator for receiving an output from said deflection signal  
9 generator and generating a high voltage; and  
10 a cathode ray tube (CRT) display for receiving said amplified video signal from  
11 said amplifier and output signals from said deflection signal generator and a

12 high voltage from said high voltage generator.

1 7 (amended twice). The system of claim 6, further comprising:

2 a liquid crystal display (LCD) driver for receiving data output from said video data

3 converter; and

4 an LCD display panel for receiving an output from said LCD driver.

1 9 (amended). In a flat panel display apparatus comprising:

2 a receiver means for reconstructing video display information including video

3 synchronization data from a host; and

4 a conversion means for converting said data to a corresponding video signal;

5 *the improvement comprising:*

6 a means for converting said data to a corresponding video signal without utilization of

7 (i) an analog-to-digital converter (ADC) or (ii) a phase-locked loop (PLL) circuit.

1 10 (amended). In a method of processing display information containing video data  
2 and synchronizing data from a host processing digital data in a serial communication, said  
3 method comprising the steps of:

4 (1) reconstructing said display information to provide reconstructed display  
5 information;

6 (2) generating a synchronizing signal by extracting the synchronizing data from said  
7 reconstructed display information;

8 (3) converting said video data to a corresponding video signal; and

9 (4) transferring said synchronizing signal and video signal to a display;

10 *the improvement comprising:* a step for converting said video data to a corresponding

11 signal without utilizing (i) an analog-to-digital converter (ADC) or (ii) a phase-locked  
12 loop (PLL) circuit.